

## **Clinical Update:**

## Managing Coronavirus Disease 2019 in Skilled Nursing Facilities

March 27, 2020

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#### **DISCLAIMER**

- This is a rapidly evolving situation so the information being presented is current as of today (3/26/20) so we highly recommend that if you have questions after today you utilize the resources that we will review at the end of this presentation.
- Opinions expressed are those of James McKinnell, M.D. not always those of the LAC
   DPH



#### **NOTICE TO THE MEDIA**

- This webinar is for healthcare providers and is a non-media event
- If you are media, please disconnect

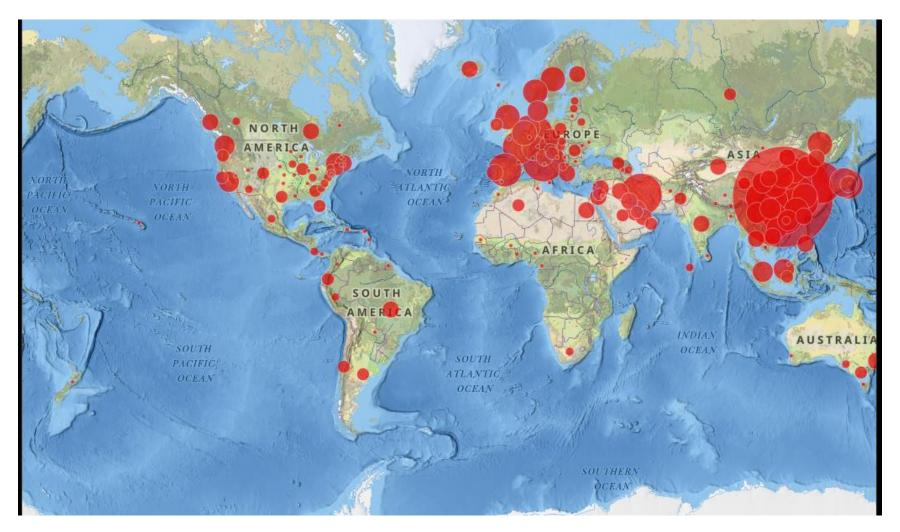


#### **Overview of Presentation**

- Current COVID-19 situation update
  - International Data
  - LA County Data
- Prepare your Building
  - Washington State Nursing Home Experience
- Nursing Home Exposure



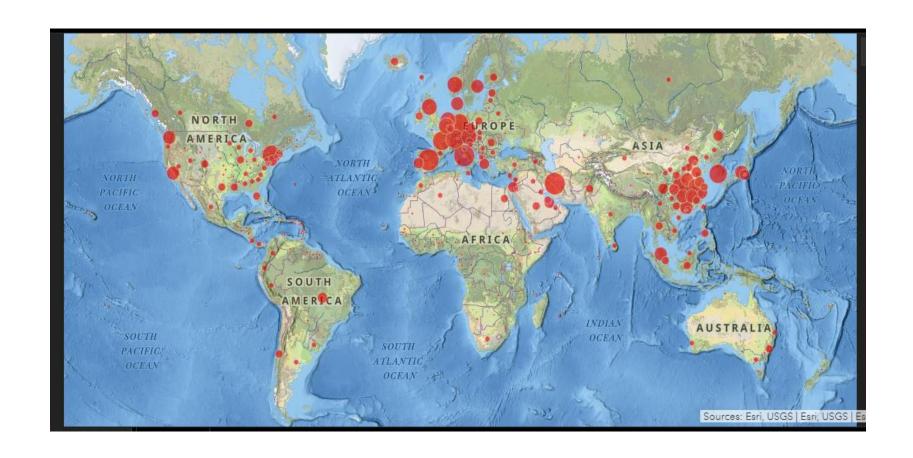
#### **Global Distribution of Cases 3/10/20**



https://coronavirus.jhu.edu/map.html, accessed 3/10/20

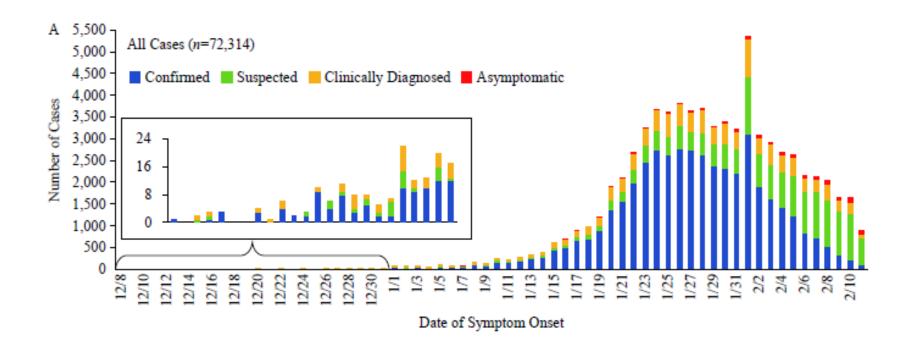


#### **Global Distribution of Cases 3/19/20**





## **Epidemiological Curves of COVID-19 in China Through February 11, 2020**







# Critical Care Utilization for the COVID-19 Outbreak in Lombardy, Italy

Early Experience and Forecast During an Emergency Response

Giacomo Grasselli, MD<sup>1,2</sup>; Antonio Pesenti, MD<sup>1,2</sup>; Maurizio Cecconi, MD<sup>3</sup>

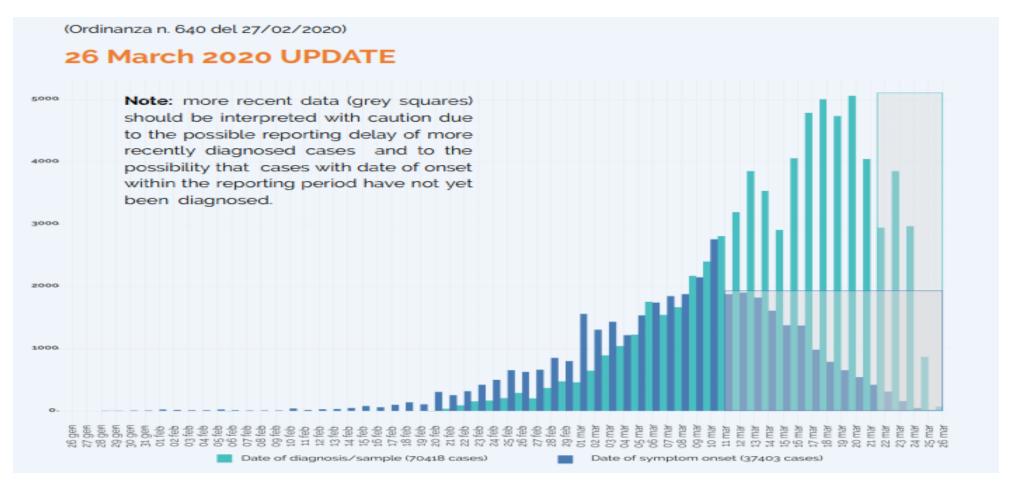
Author Affiliations | Article Information

JAMA. Published online March 13, 2020. doi:10.1001/jama.2020.4031

- Lombardy Italy 10 Million People
- 556 ICU admissions over 15 days
- Regional ICU allocation program



#### **Epidemiology Curve in Italy**





#### **US Distribution of Active Cases 3/27/20**





#### LAC DPH



**Novel Coronavirus in Los Angeles County\*** 

1216

21
Deaths

As of 12pm 03/26

\*including cases reported by Long Beach and Pasadena Health Departments

\*\* includes deaths



#### **Impact on Skilled Nursing Facilities**

- 5 SNFs with a confirmed case and more than 3 suspected cases
- 14 SNFs with ongoing investigations
- Please report any respiratory clusters to DPH so we can help with outbreak mitigation



#### LAC DPH is here to help

Health Facilities Inspection Division doing weekly check in calls

• Additional Checklist Resources available on our web-page.



#### **How To Protect Your SNF**







- 129 Cases: 81 residents, 34 HCW, 14 visitors
- 23 Deaths

<sup>1.</sup>https://www.cdc.gov/mmwr/volumes/69/wr/mm6912e1.htm?s\_cid=mm6912e1\_w accessed on 3/19/20





- Cluster of respiratory cases 2 weeks prior to testing
- Testing only after hospital transfer
- Staff worked while symptomatic
- Staff at multiple facilities, while symptomatic
- Poor PPE compliance, poor PPE supply



**Updated Checklist for Coronavirus Preparation** 





#### Things you already should have done:

- 1. Raise awareness about COVID-19 prevention through education
- 2. Develop your communication tools
- 3. Inventory necessary supplies (PPE, alcohol-based hand sanitizer)
- 4. Develop a process for screening HCP for illness to ensure staff do not come to work with symptoms
- **5. Discourage visitation** to the facility; restrict symptomatic and high-risk visitors
- 6. Track all employees and persons coming to the facility
- 7. Track where your employees are also working
- 8. Limit group activities in the facility and field trips
- 9. Promptly identify residents with symptoms of respiratory infection
- 10. Set up testing with a commercial laboratory



#### Things you already should have done:

- 1. Sanitize Rental Equipment
- 2. Consider Zone Cleaning
- 3. Initiate Daily QAPI meeting; IP, Administrator, DON, Clinical Providers, Medical Director, Housekeeping Supervisor, Maintenance Director
- 4. Daily Staff Communication stand up rounds
- 5. Review Admission Policies and Procedures



#### **Healthcare Personnel (HCP) Monitoring**

- Screen all staff (including environmental services, ancillary services, contractors and external providers) at the beginning of their shift for fever and respiratory symptoms.
- HCP with fever (T>100.0), shortness of breath, new or change in cough, or sore throat should put on a facemask and self-isolate at home
  - Encourage ill HCP to contact their provider
  - Return to work after 7 days and no fever x 72 hours
  - See below on COVID-19 confirmed HCP



#### Preserving PPE supply in times of significant shortage:

- Prioritize gowns for aerosol-generating procedures (AGPs), care activities where splashes and sprays are anticipated, and high-contact resident care activities<sup>1</sup>
- Implement extended use of eye and face protection (respirator or facemask)
  - Extended use means HCP remove only gloves and gowns (if used) and perform hand hygiene between patients with the same diagnosis (e.g., confirmed COVID-19) while continuing to wear the same eye protection and respirator or facemask (i.e., extended use).
  - HCP must take care not to touch their eye protection and respirator or facemask.
  - Eye protection and the respirator or facemask should be removed and hand hygiene performed if they become damaged or soiled, or when performing AGPs, <u>and</u> when leaving the unit.

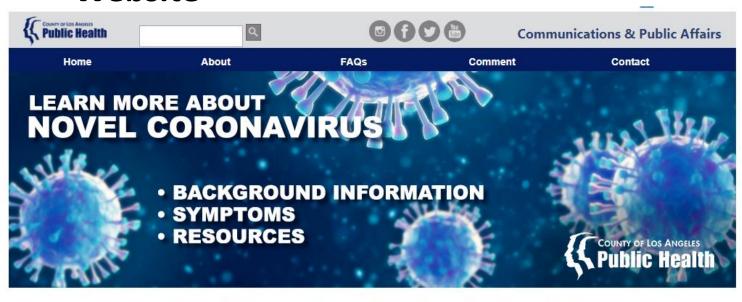
<sup>1</sup>High-contact resident care activities: dressing, bathing/showering, transferring, providing hygiene, changing linens, changing briefs or assisting with toileting, device care or use, wound care

#### **PPE Practicalities**

- Consideration for closure to new admissions depending on severity
- Emergency supplies are being made available
- No Hand Sanitizer Gel --- use soap
- No Gowns --- Consider re-usable Cloth Gowns
- No n95 masks --- Use Surgical masks and avoid Aerosol Generating procedures



#### Website



#### **Novel Coronavirus in Los Angeles County\***

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\*\* includes deaths

Individuals and Households	view +
Ticketed Events and Event Organizers	
Healthcare Professionals	
Workplace Managers	view +
Adult Day Health Centers	
Animal Cantral	viou i







#### **Geographic Cohorting**

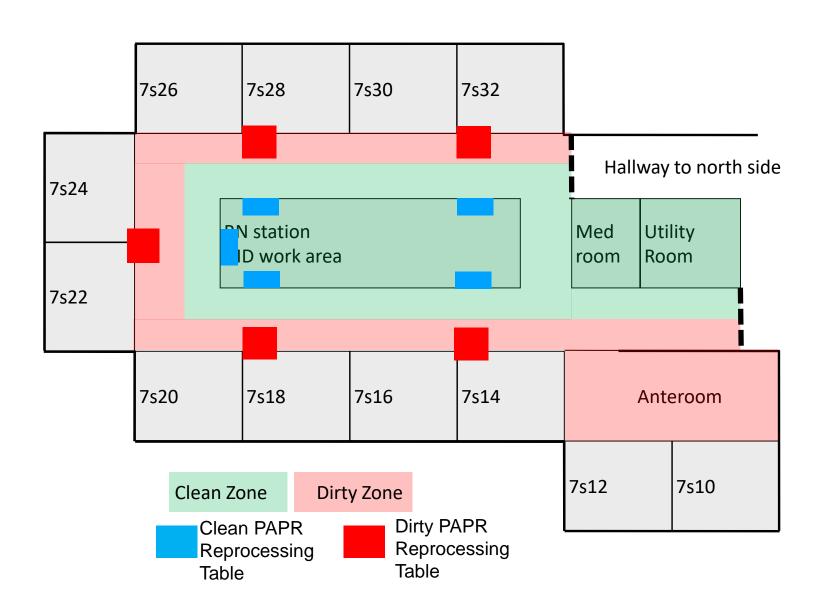
- Geographically cohort residents, limit cross cohort socialization
- Geographically cohort staff by assigning dedicated staff to specific units
- Work your unit, stay on your unit....
- Encourage Social Distancing, particularly for HCW



#### Define a Quarantine Area Before you Need it

- Examine your units, establish an area to keep patients prior to moving them into the general population
- Determine how you will organize staff
- How will you supply that area
- How will you clean that area
- What signage will you put up?

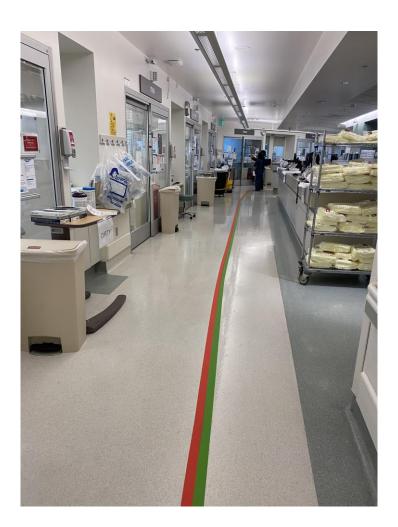
	7s26	7s28	7s30	7s32			
7s24	Hallway to north side						
	i	N station D work area				Utility Room	
7s22		- Work area					
	7s20	7s18	7s16	7s14	Anteroom		
					7s12	7s10	





#### **COVID ICU**









### **Status of Testing**







- CDC LTCF Guidance: https://www.cdc.gov/coronavirus/2019-ncov/healthcare-facilities/prevent-spread-in-long-term-care-facilities.html
- Infection Prevention: https://www.cdc.gov/coronavirus/2019-nCoV/hcp/infection-control.html
- Infection Prevention FAQs: https://www.cdc.gov/coronavirus/2019-ncov/hcp/infection-prevention-control-faq.html



#### **Testing is Slowly Getting Swamped**

- Multiple Commercial Companies offering testing
  - DPH Website: LabCorp, Quest Diagnostics, and WestPac Labs
- Capacity Ramped up Significantly
  - over 20,000- 25,000 per day
- Demand of Testing Increasing
  - 40,000-50,000 tests per day
- DPH testing for Healthcare Workers and SNF remains crucial



What do we do if we have a case





#### **Symptoms and Presentation**

- Classically Fever and Respiratory Disease
- Fever plus diarrhea or other presentations have been described
- Typically Gradual onset of dyspnea, followed by rapid respiratory decompensation
- May represent brisk cytokine response see treatment below



#### **Single Respiratory Case**

- Initiate Contact, Droplet and Eye Precautions
- Test for Respiratory Pathogens
  - Influenza/RSV or others
  - COVID-19 through commercial labs
- Review all residents
- Environmental Cleaning
- Consider Resident Discharge to home
- Discontinue all community groups events and outings
- Limit staff interacting with affected patient



#### **Two or More Respiratory Cases**

- Notify Public Health for expedited testing
- Define your quarantine area
  - Will depend on your actual building
- Cohort Staff and do not interact with non-quarantined patients
- Notify EMS for all transfers



### **Emergency Department Return to Facility Rules**

Institution of Origin	Emergency Department Patient That Does NOT Require Hospital Admission
<b>LTAC</b> (Long-Term Acute Care)	<ul> <li>Non-Infectious Explanation for IllnessNo testing for SARS CoV-2 required</li> <li>Alternative Infectious Diagnosis—Consider obtaining a single test for SARS-CoV-2, at the discretion of the ER physician</li> </ul>
<b>SNF</b> (Skilled Nursing Facility)	<ul> <li>Return patient to original facility*</li> <li>Febrile respiratory illness without alternative diagnosis, patient from a healthcare facility outbreak, contact to a caseObtain a single test for SARS-CoV-2,</li> <li>Return patient to original facility</li> <li>Continue Transmission Based Precautions at original facility**</li> </ul>
Group Living	<ul> <li>Non-Infectious Explanation for IllnessNo testing for SARS CoV-2 required</li> <li>Alternative Infectious Diagnosis Consider obtaining a single test for SARS-CoV-2, at the discretion of the ER physician</li> <li>Febrile respiratory illness without alternative diagnosis, patient from a group living outbreak, contact to a caseObtain a single test for SARS-CoV-2</li> <li>Return patient to original facility with <a href="https://home.isolation.instructions">home isolation instructions</a>.</li> <li>Contact Public Health if patient is part of a cluster or outbreak or if isolation is not feasible.</li> </ul>



### **After Positive Confirmation**

- Presume Widespread distribution
- Confirmed patients into same room is okay
- Discharge anyone who can go home
- Notify HCW that they have been exposed
- Notify Visitors
- Notify Families
- Notify Hospitals for all transfers in the last 14 days

DPH now providing public identification of SNF or Assisted Living with 3 or more cases



### **HCW** symptomatic in the Building

HCW exposures have exposed patients at multiple buildings

Call DPH



Hospital Care and Treatment

Implications for SNF admissions

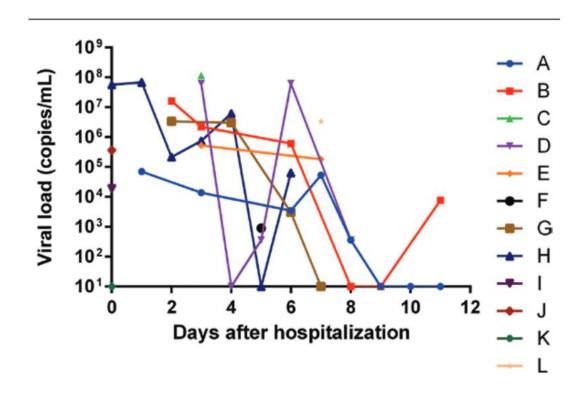


**CORRECTED PROOF** 

### Consistent Detection of 2019 Novel Coronavirus in

Saliva 🕮

Viable virus to Hospital Day 10?



**Figure 1.** Saliva viral load in patients with 2019 novel coronavirus infection. For this figure, specimens with undetected viral load were assigned a value of 10<sup>1</sup>.



### **Interfacility Transfer Rules 3/19/20 --- NOW OUTDATED**

Receiving Institution	Transfer Requirements
<b>LTAC</b> (Long-Term Acute Care)	<ul> <li>Two Serial Negative Tests for SARS-CoV-2, drawn at least 24 hours apart. Discontinue</li> <li>Transmission Based Precautions</li> <li>OR</li> </ul>
<b>SNF</b> (Skilled Nursing Facility)	<ul> <li>10 Days after admission AND No fever x 72 hrs without the use of fever reducing medications. Continue Transmission Based Precautions at receiving facility*</li> </ul>
Group Living	<ul> <li>Two Serial Negative Tests for SARS-CoV-2, drawn at least 24 hours apart. Discontinue</li> <li>Transmission Based Precautions</li> </ul>

<sup>\*</sup>Transmission based precautions can be discontinued in the receiving facility only with two serial negative tests for SARS-CoV-2, drawn at least 24 hours apart

In cases of hospital overload, this discharge guidance may be adjusted by the department of public health to fit individual patient needs.

Patients should not be transferred if the receiving facility cannot maintain Transmission Based Precautions. https://www.cdc.gov/coronavirus/2019-ncov/infection-control/control-recommendations.html
Zou et al. NEJM March 18, 2020



## Natural History of 138 Hospitalized Patients with COVID-19 in Wuhan, China

- Median time from symptom onset to:
  - Dyspnea = 5 days (IQR: 1-10 days)
  - Hospitalization = 7 days
  - ARDS = 8 days
- Median length of hospital stay: 10 days

### **Hydroxychloroquine + Azithromycin**

- Chloroquine and Hydroxychloroquine have antiviral activity against SARS CoV-2
- Azithromycin may have antiviral effects and some older literature suggests that it may concentrate Chloroquine/Hydroxychlorquine inside human cell
- Hydroxychloroquine (plaquenil) has a better safety profile than chloroquine



ACCEPTED MANUSCRIPT

# In Vitro Antiviral Activity and Projection of Optimized Dosing Design of Hydroxychloroquine for the Treatment of Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) 3

Xueting Yao, Fei Ye, Miao Zhang, Cheng Cui, Baoying Huang, Peihua Niu, Xu Liu, Li Zhao, Erdan Dong, Chunli Song ... Show more

**Author Notes** 

- Viral Infected Vero Cells Standard Model for SARS
- Hydroxychloroquine nearly 10X more potent than Chloroquine
- 800 mg po load, followed by 400 mg po qday





# International Journal of Antimicrobial Agents



Available online 20 March 2020, 105949

In Press, Journal Pre-proof ?

Hydroxychloroquine and azithromycin as a treatment of COVID-19: results of an open-label non-randomized clinical trial



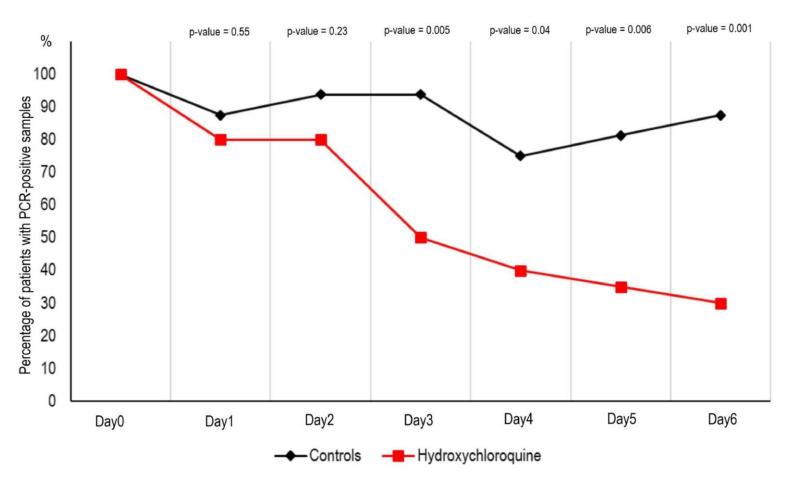
Hydroxychloroquine and azithromycin as a treatment of COVID-19: results of an open-label non-randomized clinical trial

- Hospitalized patients over 12 with PCR + SARS CoV2
- Hydroxychloroquine 200 TID
- Azithromycin added by "clinical presentation"
- Viral Clearance at Day 6 was primary endpoint

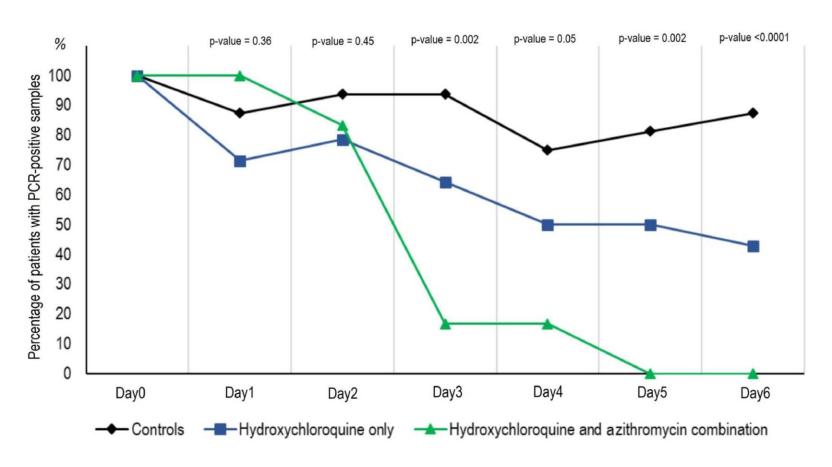


Hydroxychloroquine and azithromycin as a treatment of COVID-19: results of an open-label non-randomized clinical trial

- Hydroxychloroquine 26 Patients
- Azithromycin added by "clinical presentation" 6/26
- Control Patients 16



Gautret et al. International Journal of Antimicrobial agents, <a href="https://www.sciencedirect.com/science/article/pii/S0924857920300996">https://www.sciencedirect.com/science/article/pii/S0924857920300996</a> accessed March 25,2020



Gautret et al. International Journal of Antimicrobial agents, <a href="https://www.sciencedirect.com/science/article/pii/S0924857920300996">https://www.sciencedirect.com/science/article/pii/S0924857920300996</a> accessed March 25,2020

	Day3 post inclusion		on	Day4 post inclusion		Day5 post inclusion			Day6 post inclusion			
	Number of			Number of			Number of			Number of		
	negative			negative			negative			negative		
	patients/total	%	p-value	patients/total	%	p-	patients/total	%	p- value	patients/total	%	p- value
	number of			number of	O	value	number of		value	number of		value
	patients			patients			patients			patients		
Control patients	1/16	6.3		4/16	25.0		3/16	18.8		2/16	12.5	
Hydroxychloroquine	5/14	35.7		7/14	50.0		7/14	50.0		8/14	57.1	
treatment only			0.002			0.05			0.002			<0.001
Hydroxychloroquine												
and azithromycin	5/6	83.3		5/6	83.3		6/6	100		6/6	100	
combined treatment												

### Hydroxychloroquine

- Multiple dosing recommendations in the literature
- Pharmacokinetics are Long
- Peak levels in 3-4 Hours
- Half life is 22 days
- Personal Opinion Target a total dose --- no need to go past 5 days!!!!!



### Hydroxychloroquine

- Cardiac Toxicity
  - AV Block, Sick Sinus Syndrome
  - QT prolongation
- Occular Toxicity:
  - Duration > 5 years
  - Daily Doses > 5mg/kg
- Skeletal Muscle Myopathy and Neuropathy
- Hypoglycemia

### **Azithromycin**

- Prolonged Elimination phase of PK
  - Half life of 68 hours
- QT prolongation
  - Azithromycin known to prolong the QT
  - Co-Administration of Chloroquine increased the QT
- Hepatotoxicity
  - Monitor LFTs

### Remdesivir

- Remdesivir is a novel antiviral agent
  - RNA Chain termination through RNA-dependent RNA polymerase
- Not approved for Medical Use
- Established as safe in Clinical Trial for Ebola
  - Wide therapeutic index, but not effective for Ebola

### Remdesivir

- Remdesivir 200 mg IV, followed by 100 mg IV qday to day 10
- Compassionate Use Replaced by Expanded Access
- Clinical Trials in LA Ongoing



### A Trial of Lopinavir–Ritonavir in Adults Hospitalized with Severe Covid-19

- 199 patients Randomized to Lop/r or SOC
- Hospitalized adults with O2 Sat <94%</li>
- Lopinavir/r n=99
- SOC n=100
  - O2, Intubation, Antibiotics, vasopressors, HD, ECMO

No Benefit to use of Lopinavir/ritonavir





### **Treatment Approach**

### **Hospital Admission Non-ICU**

Hydroxychloroquine 800 mg load Followed by 400 mg qday x 4 days.

Azithromycin 500 mg Followed by 250? 500? mg po qday x 4 days.

### Do Not Go Past 5 Days



### **Tocilizumab**

- Cytokine Release Syndrome Treatment
- IL-6 Receptor Blocker
- Another option for severe disease with anecdotal case reports of effective response to therapy









### **Overriding Principles in Caring for COVID-19 Safely**

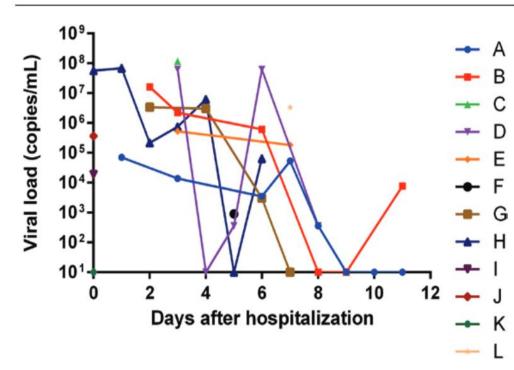
- Care for patients in a safe, culturally sensitive environment.
- Minimize risk of HCW exposure to COVID-19.
- Cause as little disruption to normal functioning as possible.

- CDC LTCF Guidance: https://www.cdc.gov/coronavirus/2019-ncov/healthcare-facilities/prevent-spread-in-long-term-care-facilities.html
- Infection Prevention: https://www.cdc.gov/coronavirus/2019-nCoV/hcp/infection-control.html
- Infection Prevention FAQs: https://www.cdc.gov/coronavirus/2019-ncov/hcp/infection-prevention-control-faq.html

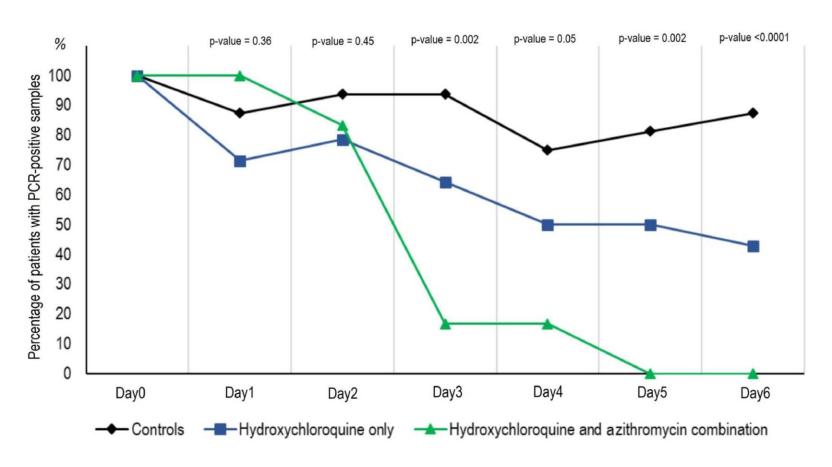
CORRECTED PROOF

# Consistent Detection of 2019 Novel Coronavirus in Saliva

- Viral Culture Study
- Not Many Patients
- Risk of Transmission
   Likely low, but not zero



**Figure 1.** Saliva viral load in patients with 2019 novel coronavirus infection. For this figure, specimens with undetected viral load were assigned a value of 10<sup>1</sup>.



Gautret et al. International Journal of Antimicrobial agents, <a href="https://www.sciencedirect.com/science/article/pii/S0924857920300996">https://www.sciencedirect.com/science/article/pii/S0924857920300996</a> accessed March 25,2020



### **Interfacility Transfer Rules 3/27/20**

Receiving Institution	Transfer Requirements
<b>LTAC</b> (Long-Term Acute Care)	No specific antiviral treatment: 10 days after admission AND No fever x 72 hrs without the use of fever reducing medications.  OR
<b>SNF</b> (Skilled Nursing Facility)	SARS CoV-2 targeted antiviral treatment*: No fever x 72 hrs without the use of fever reducing medications. Patient should complete the course of antiviral therapy.  Continue Transmission Based Precautions at receiving facility**
Group Living	<ul> <li>No specific antiviral treatment: 10 days after admission AND No fever x 72 hrs without the use of fever reducing medications.</li> <li>OR</li> <li>SARS CoV2 targeted antiviral treatment*: 7 days after admission AND No fever x 72 hrs without the use of fever reducing medications. Patient should complete the course of antiviral therapy.</li> </ul>

<sup>\*</sup> Current treatment practices in LA County have included Hydroxychloroquine PLUS Azithromycin or <u>Remdesivir</u>. Hydroxychloroquine alone has also been used, particularly in patients with QT interval changes. Chloroquine not thought to be effective.

<sup>\*\*</sup>Transmission based precautions should be continued until all symptoms have resolved or for 14 days, whichever is longer. Patient should be preferably placed in a location designated to care for COVID-19 patients. The patient may be placed in a shared room with other confirmed COVID patients.



### **Getting them Out of Isolation**





### CDC guidance document – Non Test Based Strategy

- 7 Days have passed since symptoms first appeared
- 3 Days (72 Hours) since recovery
  - No Fever x 72 Hours without the use of fever reducing medications

### HOWEVER .....



### When Discharged to a Long Term Care or Assisted Living

Patient with persistent symptoms from COVID-19 (e.g. persistent cough)

- Should be placed in a single room
- Restricted to their room
- Wear a facemask during care activities

Until all symptoms are completely resolved or until 14 days after illness onset, whichever is longer



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### Website



COVID-19

LAHAN alerts

COVID-19 Press Releases

DPH COVID-19 public page

DPH COVID-19 provider page:

**Health Professionals** 

Provider Checklist
Provider Reporting

**Laboratory Testing** 

Infection Control and PPE

FAQs for Providers

Home Isolation Instructions

Healthcare Facilities

Dentists

Dates Massaciate

Please refresh your browser to see the latest updates and versions of our documents.

#### **Current Situation and Updates**

Updated 3/24/2020

**Situation:** The rate of new COVID-19 cases in LA County continues to steadily increase. For the latest information, see the LA County <u>COVID-19 Surveillance Data</u>, list of <u>cases by city and community</u>, and <u>press</u> releases.

- Monitoring EMS Personnel LAC DPH Guidance (3-25-20)
- LAC DPH Health Alert (3-25-20): Preserving Critical Supplies and Resources; New COVID-19 Mortality Reporting.
- <u>LAC DPH Health Advisory (3-19-20)</u>: COVID-19 Testing, Isolation and Quarantine, and Health Care Worker Monitoring Recommendations. Health care providers are encouraged to <u>join</u> the Los Angeles Health Alert Network (<u>LAHAN</u>) to receive DPH email notifications on COVID-19.
- Print materials for your patients and your facility new mobile friendly COVID-19 webpage. Includes
  posters and guidance for patients such as home isolation, home care, and quarantine, what to do when
  sick, hand washing, and cleaning
- Return-to-Facility & Home Discharge Rules for patients in the Emergency Department who are suspected to have COVID-19 (3-23-20)



### Website



Health Professionals COVID-19			
LAHAN alerts			
COVID-19 Press Releases			
DPH COVID-19 public page			
DPH COVID-19 provider page:			
Provider Checklist			

Healthcare Facilities	Page Updated 3-26-2020
Surge Planning	
Surge Planning Letter to Healthcare Executives and Chief N Letter	Medical Officers (3-17-20) <u>Health Officer</u>
Guidance for Surge Capacity: California Department of Public	Health (CDPH) is encouraging facilities to



### Website

#### Long Term Care Facilities Including Skilled Nursing Facilities (SNFs)

- Managing COVID-19 in Long-Term Care Facilities (LTCFs) <u>Guidance</u> (3-23-20)
- Return-to-Facility & Home Discharge Rules for patients in the Emergency Department who are suspected to have COVID-19 (3-23-20) <u>Rules</u>
- Interfacility Transfer and Home Discharge Rules for Patients with Lab Confirmed COVID-19 (3-19-20)
   Rules
- COVID-19 Skilled Nursing Facilities Webinar Managing Coronavirus Disease 2019 in Skilled Nursing Facilities (3-6-20) Webinar





